

# Inclinometers

<b>Inclinometer MEMS / capacitive</b>	<b>IS60, 1-dimensional</b>	<b>CANopen</b>
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With the IS60 inclinometer 1-dimensional inclinations in the measuring range 360° can be measured.

The sensor has a standardised CANopen interface, which enables easy configuration and start-up. All the parameters are stored in the internal permanent memory.



**CANopen**



High protection level



Shock / vibration resistant



Reverse polarity protection

## Robust and reliable

- Protection rating IP68/IP69K
- Robust plastic housing
- High shock resistance

## User-friendly and accurate

- High resolution and accuracy
- Programmable vibration suppression
- High sampling rate and bandwidth

## Order code Inclinometer IS60

**8.IS60** . **14523**  
Type      a b c d e

**Attention:**  
This is not a standard product. Delivery on request.  
Min. order quantity / frame order required.

**a** Measuring direction  
1 = 1-dimensional

**b** Measuring range  
4 = 360°

**c** Interface  
5 = CANopen

**d** Supply voltage  
2 = 10 ... 30 V DC

**e** Type of connection  
3 = 2 x M12 connector

## Connection Technology

<b>Connector, self-assembly (straight)</b>	M12 female connector with coupling, Bus in	<b>05.B-8151-0/9</b>
	M12 male connector with external thread, Bus out	<b>05.BS-8151-0/9</b>
<b>Cordset, pre-assembled</b>	M12 female connector with coupling, 6 m [19.69'] PVC cable, Bus in	<b>05.00.6021.2211.006M</b>
	M12 male connector with external thread, 6 m [19.69'] PVC cable, Bus out	<b>05.00.6021.2411.006M</b>

Further accessories can be found in the accessories section or in the accessories area of our website at: [www.kuebler.com/accessories](http://www.kuebler.com/accessories)  
Additional connectors can be found in the connection technology section or in the connection technology area of our website at: [www.kuebler.com/connection\\_technology](http://www.kuebler.com/connection_technology)

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## Technical data

Mechanical characteristics		General electrical characteristics	
<b>Connection CAN</b>	M12 connector, 5-pin	<b>Supply voltage</b>	10 ... 30 V DC
<b>Weight</b>	approx. 0.2 kg	<b>Power consumption</b>	40 ... 105 mA
<b>Protection EN 60529</b>	IP68 / IP69K	<b>Reverse polarity protection (+V)</b>	yes
<b>Working temperature range</b>	-40°C ... +80°C	<b>Measuring axes</b>	1
<b>Materials</b>	plastic PA12-GF30	<b>Measuring range</b>	360°, no limit stop
<b>Shock resistance</b>	30 g, 11 ms	<b>Resolution</b>	≤ 0.01°
<b>Vibration resistance</b>	55 Hz (1 mm)	<b>Linearity deviation</b>	max. ± 0.4°
<b>Dimensions</b>	68 x 42.5 x 42.5 mm	<b>Calibration accuracy (at 25°C)</b>	± 0.1° (Zero point and final values)
<b>Interface characteristics CANopen</b>		<b>Temperature drift (Zero point)</b>	typ. ± 0.008°/K
<b>Interface</b>	CANopen according to CiA DS-301, Profile to CiA DSP-410	<b>Sampling rate</b>	100 Hz
<b>Data rates</b>	10 kbit/s, 20 kbit/s, 50 kbit/s, 125 kbit/s, 250 kbit/s, 500 kbit/s, 800 kbit/s, 1 Mbit/s	<b>CE compliant acc. to</b>	EN 61326-2-3
<b>Functions</b>	TPDO (RTR, cyclic, event-driven, synchronized), parameterization per SDO and object register, digital filter (Butterworth Low pass, 8th order), SYNC Consumer, EMCY Producer, output and control of internal device temperature (±2.0 K accuracy), failure control with the help of Heartbeat or Nodeguarding / Lifeguarding	<b>RoHS compliant acc. to</b>	EU guideline 2011/65/EU

A full description of the technical data can be found in the relevant product manual at [www.kuebler.com](http://www.kuebler.com).

## Terminal assignment

PIN	Signal	Assignment
1	CAN_SHLD	Shield
2	CAN V+	Supply voltage (+24 V DC)
3	CAN_GND	0 V
4	CAN_H	CAN_H Bus cable
5	CAN_L	CAN_L-Bus cable



## Dimensions

Dimensions in mm [inch]

